

**TRIS(TRIMETHYLSILYL)ANTIMONY**

Safety Data Sheet SIT8721.3

Issue date: 19/08/2020

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form	: Substance
Physical state	: Liquid
Substance name	: TRIS(TRIMETHYLSILYL)ANTIMONY
Product code	: SIT8721.3
Formula	: C ₉ H ₂₇ Si ₃
Synonyms	: TRIS(TRIMETHYLSILYL)STIBINE TRIS(TRIMETHYLSILYL)ANTIMONIDE
Chemical family	: ORGANOSILANE

1.2. Relevant identified uses of the substance or mixture and uses advised against**1.2.1. Relevant identified uses**

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet**GELEST, INC.**11 East Steel Road
Morrisville, PA 19067**USA**

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

info@gelest.com - www.gelest.com**GELEST INC.**Fritz-Klatte-Strasse 8
65933 Frankfurt**Germany**

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info@gelestde.com - www.gelestde.com**1.4. Emergency telephone number**

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flammable liquids, Category 2	H225
Pyrophoric Liquids, Category 1	H250
Serious eye damage/eye irritation, Category 2	H319
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :



GHS02



GHS07

Signal word (CLP) :

: Danger

Hazard statements (CLP) :

: H225 - Highly flammable liquid and vapour.
H250 - Catches fire spontaneously if exposed to air.

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Precautionary statements (CLP)

H319 - Causes serious eye irritation.

- : P210 - Keep away from heat, open flames, sparks. No smoking.
P222 - Do not allow contact with air.
P231+P232 - Handle and store contents under nitrogen or argon in sealed containers below 20°C.. Protect from moisture.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

- Substance type : Mono-constituent
Name : TRIS(TRIMETHYLSILYL)ANTIMONY
CAS-No. : 7029-27-8

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tris(trimethylsilyl)antimony	(CAS-No.) 7029-27-8	99 – 100	Flam. Liq. 2, H225 Pyr. Liq. 1, H250 Eye Irrit. 2, H319

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
- First-aid measures after skin contact : Wash with plenty of water/.... Get medical advice/attention.
- First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May be harmful if inhaled.
- Symptoms/effects after skin contact : May cause skin irritation. May be harmful in contact with skin.
- Symptoms/effects after eye contact : Causes serious eye irritation.
- Symptoms/effects after ingestion : May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Foam. Carbon dioxide. Dry chemical.
- Unsuitable extinguishing media : Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Catches fire spontaneously if exposed to air. Pyrophoric liquids. Highly flammable liquid and vapour. Irritating fumes and vapors may develop when material is exposed to water or open flame.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate every possible source of ignition.

6.1.1. For non-emergency personnel

Protective equipment : Wear protective equipment as described in Section 8.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Product may ignite spontaneously if exposed to air.

Precautions for safe handling : Avoid all eye and skin contact and do not breathe vapour and mist. Do not allow contact with air. Take precautionary measures against static discharge.

Hygiene measures : Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep in a cool place. Store under dry nitrogen or argon in sealed containers below 20°C.

Incompatible materials : Acids. alcohols. Moisture. Oxygen. Oxidizing agent. Water.

Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Tris(trimethylsilyl)antimony (7029-27-8)		
Italy - Portugal - USA ACGIH	ACGIH TWA (mg/m³)	0.5 mg/m³ Antimony (Sb)
USA OSHA	OSHA PEL (TWA) (mg/m³)	0.5 mg/m³ Antimony (Sb)

8.2. Exposure controls

Appropriate engineering controls:

Glove box or sealed system under inert atmosphere is required.

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Full face shield with chemical workers goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

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Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid. Turns dark on exposure to light or during extended storage, fumes in air and may ignite.
Molecular mass	: 341.33 g/mol
Colour	: Straw.
Odour	: Disagreeable.
Odour threshold	: No data available
Refractive index	: 1.5428
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: -1 – 6 °C
Boiling point	: 88 °C @ 2 mm Hg
Flash point	: < -18 °C
Auto-ignition temperature	: < 75 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Catches fire spontaneously if exposed to air,Pyrophoric liquids,Highly flammable liquid and vapour.
Vapour pressure	: < 0.1 mm Hg @ 25°C
Relative vapour density at 20 °C	: > 1
Relative density	: 1.246
Solubility	: Reacts extremely rapidly with moisture and oxygen.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable in sealed containers stored under a dry inert atmosphere.

10.3. Possibility of hazardous reactions

Reacts with oxygen, water and moisture in air.

10.4. Conditions to avoid

Flammable. Heat. Open flame. Sparks.

10.5. Incompatible materials

Acids. alcohols. Moisture. Oxidizing agent. Oxygen. Water.

10.6. Hazardous decomposition products

Organic acid vapors. Antimony. Antimony oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: Not classified

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
	None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: This material is expected to have health effects similar to antimony, but no studies have been conducted.
Symptoms/effects after inhalation	: May cause irritation to the respiratory tract. May be harmful if inhaled.
Symptoms/effects after skin contact	: May cause skin irritation. May be harmful in contact with skin.
Symptoms/effects after eye contact	: Causes serious eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects	: This substance may be hazardous to the environment.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations	: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility..
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 2845
UN-No. (IMDG)	: 2845
UN-No. (IATA)	: 2845
UN-No. (ADN)	: 2845
UN-No. (RID)	: 2845

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: PYROPHORIC LIQUID, ORGANIC, N.O.S.
Proper Shipping Name (IMDG)	: PYROPHORIC LIQUID, ORGANIC, N.O.S.
Proper Shipping Name (IATA)	: Pyrophoric liquid, organic, n.o.s.
Proper Shipping Name (ADN)	: PYROPHORIC LIQUID, ORGANIC, N.O.S.
Proper Shipping Name (RID)	: PYROPHORIC LIQUID, ORGANIC, N.O.S.
Transport document description (ADR)	: UN 2845 PYROPHORIC LIQUID, ORGANIC, N.O.S. (TRIS(TRIMETHYLSILYL)ANTIMONY), 4.2, I, (B/E)

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Transport document description (IMDG)	: UN 2845 PYROPHORIC LIQUID, ORGANIC, N.O.S. (TRIS(TRIMETHYLSILYL)ANTIMONY), 4.2, I
Transport document description (IATA)	: UN 2845 Pyrophoric liquid, organic, n.o.s. (TRIS(TRIMETHYLSILYL)ANTIMONY), 4.2
Transport document description (ADN)	: UN 2845 PYROPHORIC LIQUID, ORGANIC, N.O.S. (TRIS(TRIMETHYLSILYL)ANTIMONY), 4.2, I
Transport document description (RID)	: UN 2845 PYROPHORIC LIQUID, ORGANIC, N.O.S. (TRIS(TRIMETHYLSILYL)ANTIMONY), 4.2, I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 4.2
Danger labels (ADR)	: 4.2

:



IMDG

Transport hazard class(es) (IMDG)	: 4.2
Danger labels (IMDG)	: 4.2

:



IATA

Transport hazard class(es) (IATA)	: 4.2
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ADN

Transport hazard class(es) (ADN)	: 4.2
Danger labels (ADN)	: 4.2

:



RID

Transport hazard class(es) (RID)	: 4.2
Danger labels (RID)	: 4.2

:



14.4. Packing group

Packing group (ADR)	: I
Packing group (IMDG)	: I
Packing group (IATA)	: Not applicable
Packing group (ADN)	: I
Packing group (RID)	: I

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

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14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: S1
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P400
Mixed packing provisions (ADR)	: MP2
Portable tank and bulk container instructions (ADR)	: T22
Portable tank and bulk container special provisions (ADR)	: TP2, TP7
Tank code (ADR)	: L21DH
Tank special provisions (ADR)	: TU14, TC1, TE21, TM1
Vehicle for tank carriage	: AT
Transport category (ADR)	: 0
Special provisions for carriage - Packages (ADR)	: V1
Special provisions for carriage - Operation (ADR)	: S20
Hazard identification number (Kemler No.)	: 333
Orange plates	:

333

2845

Tunnel restriction code (ADR)	: B/E
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- Transport by sea

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 0
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P400
Special packing provisions (IMDG)	: PP31
Tank instructions (IMDG)	: T22
Tank special provisions (IMDG)	: TP2, TP7
EmS-No. (Fire)	: F-G
EmS-No. (Spillage)	: S-M
Stowage category (IMDG)	: D
Stowage and handling (IMDG)	: H1
Segregation (IMDG)	: SG63, SG26
Properties and observations (IMDG)	: Highly flammable liquids, may ignite spontaneously in moist air. In contact with air, evolve irritating and slightly toxic fumes.

- Air transport

PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: Forbidden
CAO max net quantity (IATA)	: Forbidden
ERG code (IATA)	: 4W

- Inland waterway transport

Classification code (ADN)	: S1
Special provisions (ADN)	: 274
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

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- Rail transport

Classification code (RID)	: S1
Special provisions (RID)	: 274
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P400
Mixed packing provisions (RID)	: MP2
Portable tank and bulk container instructions (RID)	: T22
Portable tank and bulk container special provisions (RID)	: TP2, TP7
Tank codes for RID tanks (RID)	: L21DH
Special provisions for RID tanks (RID)	: TU14, TU38, TC1, TE21, TE22, TE25, TM1
Transport category (RID)	: 0
Special provisions for carriage – Packages (RID)	: W1
Hazard identification number (RID)	: 333

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

TRIS(TRIMETHYLSILYL)ANTIMONY is not on the REACH Candidate List

TRIS(TRIMETHYLSILYL)ANTIMONY is not on the REACH Annex XIV List

TRIS(TRIMETHYLSILYL)ANTIMONY is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

TRIS(TRIMETHYLSILYL)ANTIMONY is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

Germany

Regulatory reference : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

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Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information

: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Pyr. Liq. 1	Pyrophoric Liquids, Category 1
H225	Highly flammable liquid and vapour.
H250	Catches fire spontaneously if exposed to air.
H319	Causes serious eye irritation.

SDS EU (REACH Annex II) - Custom

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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